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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/610,237	07/05/2000	Michael N. Grimbergen	2813.D1/SILICO/JB	5355

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Patent Counsel
Applied Materials Inc
P.O. Box 450-A
Santa Clara, CA 95052

EXAMINER

LUND, JEFFRIE ROBERT

ART UNIT	PAPER NUMBER
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1763

DATE MAILED: 05/31/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/610,237

Applicant(s)

GRIMBERGEN ET AL.

Examiner

Jeffrie R. Lund

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 March 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20,26-32,34-38 and 89-128 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20,26-32,34-38 and 89-128 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 05 July 2000 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other.

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DETAILED ACTION

Allowable Subject Matter

1. Prosecution on the merits of this application is reopened on claims 10, 11, 17, 18, 37, and 38 considered unpatentable for the reasons indicated below:

The claims 10, 11, 17, 18, 37, and 38 were objected to in the first action. These claims are now rejected under Grimbergen et al and Oshida et al as noted below.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 10, 11, 17, 18, 37, 38, and 89-128 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-66 of U.S. Patent No. 6,390,019 in view of Oshida et al, JP 9-126991.

Grimbergen et al ('019) teaches a reactor with a support, a gas distributor, a gas energizer, a radiation transmitting portion, a magnetic field source or an electromagnetic field, and an exhaust.

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Grimbergen et al differs from the present claims in that Grimbergen et al does not teach a mask having a plurality of apertures with a specific shape and a specific aspect ratio.

Oshida et al teaches a mask, having a plurality of apertures with an aspect ratio, which is used to shield a radiation transmitting portion and reduce access of process gas to the radiation transmitting portion.

The motivation for using the mask of Oshida et al in the apparatus of Grimbergen et al is to further reduce access of process gases to the radiation transmitting portion. The specific size, aspect ratio, and shape are obvious design limitations and it would be obvious to optimize the size, aspect ratio, and shape to minimize the access of the process gas to the radiation transmitting portion.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the mask of Oshida et al in the apparatus of Grimbergen et al.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 26, 27, 29, 32, 35, and 36 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Oshida et al, JP 9-126991.

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Oshida et al teaches the claimed invention in the specification (paragraph 26) and figure 4.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-9, 12-16, 19, 20, 28, 30, 31, and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koshimizu, US Patent 5,290,383, in view of Oshida et al.

Koshimizu teaches a reactor with a support 3, a gas distributor 1a, a gas energizer 2, a radiation transmitting portion 11, and an exhaust 1b.

Koshimizu differs from the present claims in that Koshimizu does not teach a mask having a plurality of apertures with a specific shape and a specific aspect ratio.

Oshida et al teaches a mask, having a plurality of apertures with an aspect ratio, which is used to shield a radiation transmitting portion and reduce access of process gas to the radiation transmitting portion.

The motivation for using the mask of Oshida et al in the apparatus of Koshimizu is to further reduce access of process gases to the radiation transmitting portion. The specific size, aspect ratio, and shape are obvious design limitations and it would be obvious to optimize the size, aspect ratio, and shape to minimize the access of the process gas to the radiation transmitting portion.

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Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the mask of Oshida et al in the apparatus of Koshimizu.

Response to Arguments

8. Applicant's arguments filed March 12, 2002 have been fully considered but they are not persuasive.

In regard to the argument that Oshida et al does not teach selecting an aspect ratio that is selected to reduce deposition of process residues on the radiation transmitting portion, and has other considerations for optimizing the aspect ratio, the examiner disagrees. Oshida et al clearly teaches that the mask apertures have an aspect ratio that limits the deposition of process residues on the radiation transmitting portion (see the last line of paragraph 26). As to any other considerations in making the mask, the claim only requires that the aspect ratio be chosen to reduce deposition of process residues.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrie R. Lund whose telephone number is (703) 308-1796. The examiner can normally be reached on Monday-Thursday (6:30 am-6:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Mills can be reached on (703) 308-1633. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



Jeffrie R. Lund
Primary Examiner
Art Unit 1763

JRL
May 29, 2002